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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/717,744

11/20/2003

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EXAMINER

PRONE, JASON D

ART UNIT

PAPER NUMBER

3724

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/717,744	Applicant(s) SCIULLI ET AL.	
	Examiner Jason Prone	Art Unit 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2-4-08</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warehime (5,782,673) in view of McDonnell et al. (5,591,184).

In regards to claim 1, Warehime discloses the invention including a mixing tube comprising a body (472) having a bore extending there through along a longitudinal axis (138) and being formed to withstand the passage of a high-pressure fluid jet (Title), a collar (464), the collar being sized and capable of sliding upward through a bore of a cutting head (462) and having a terminal end surface of the collar substantially normal to the longitudinal axis to bottom out against a surface of a member in the bore of the cutting head substantially normal to the longitudinal axis to prevent the mixing tube from being inserted any further into the cutting head (top surface of 464 bottoms out against the bottom surface of 456. Both are normal to 138), and the terminal end surface being spaced from a top surface of the mixing tube body (the top surface of 464 is clearly spaced from the top surface of 472 in Fig. 12).

In regards to claims 4 and 5, Warehime discloses the outer surface of the collar is substantially cylindrical (464) and the outer surface of the collar is substantially frusto-conical (464).

However, in regards to claim 1, Warehime fails to disclose the collar is rigidly fixed to an outer surface of the mixing tube in an upper region of the tube prior to the mixing tube being installed in the jet system.

McDonnell et al. teaches that it is old and well known in the art of fluid jet cutters to incorporate a collar that is rigidly fixed to an outer surface of the mixing tube in an upper region of the tube prior to the mixing tube being installed in the jet system (frusto-conical portion of 34). Basically, Warehime discloses a collar and a tube wherein the tube slides into the collar but does not disclose that they are rigidly fixed together. McDonnell et al. disclose a tube that has a frusto-conical portion collar. Meaning the tube has a frusto-conical portion which is considered a collar and therefore the collar or frusto-conical portion is rigidly fixed to the tube because they are of one piece-construction. Basically, McDonnell et al. teach it is old and well known for two commonly used parts of fluid jet cutters to be of a one-piece construction. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention to provide Warhime with a rigidly fixed collar/mixing tube, as taught by McDonnell et al., to allow for the manufacturers to produce one big part instead of two different smaller parts and because all claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective function and the combination would have yielded predictable results.

However, with regards to claims 1 and 3, Warehime in view of McDonnell et al. fail to disclose the distance from a top surface of the mixing tube to a bottom surface of the collar is 0.02-2.0 inches and the wall thickness of the collar is 0.01-0.2 inches. It

would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the claimed dimensions, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. It would have been an obvious matter of design choice to incorporate the claimed dimensions, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It is noted that there are a limited number of choices available, with regards to the claimed dimensions, to a person of ordinary skill in the art and therefore would have been obvious to experiment/try the dimension in the "limited choice" range. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention to have provided Warehime in view McDonnell et al. with the size limitations, because a person of ordinary skill has good reason to pursue the known options within technical grasp. If this leads to the anticipated success, it is likely the product is not of innovation but of ordinary skill and common sense.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Warehime in view of McDonnell et al. as applied to claim 1 above, and further in view of Yie (4,945,688). Warehime in view of McDonnell et al. disclose the invention including the collar is surrounded by a nut (458 in Warehime).

However, Warehime in view of McDonnell et al. fail to disclose an outer surface of the nut being threaded to engage a threaded inner surface of a cutting head.

Yie teaches it is old and well known in the art of fluid jets to incorporate outer surface of the nut being threaded (82) to engage a threaded inner surface of a cutting head (Fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention to have provided Warhime in view McDonnell et al. with the thread locations, as taught by Yie, because the substitution of one known element for another would have yielded predictable results and all claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective function and the combination would have yielded predictable results.

Response to Arguments

4. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection. With regards to item 464 of Warehime not bottoming out, column 25 lines 9-11 does not state anything with regards to the top surface of 464 is not bottomed out against 456 as it is clearly shown in Fig. 12.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Prone whose telephone number is (571)272-4513. The examiner can normally be reached on 7:30-5:00 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer D. Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

25 March 2008
/Jason Prone/
Primary Examiner, Art Unit 3724